RAW SEQUENCE LISTING
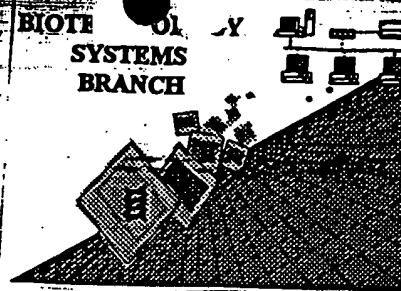# ERROR REPORT

BIOTE   OL   Y
SYSTEMS
BRANCH

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: _09/699,667_

Source: _OIPE_

Date Processed by STIC: _11-28-00_

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin30help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER VERSION 3.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.
Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

<u>Checker Version 3.0 can be down loaded from the USPTO website at the following address:</u>
http://www.uspto.gov/web/offices/pac/checker

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.

☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).

☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).

☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."

☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).

☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).

☐ 7. Other: _____

Applicant Must Provide:

☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".

☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.

☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216
For CRF Submission Help, call (703) 308-4212
PatentIn Software Program Support (SIRA)
    Technical Assistance...703-287-0200
    To Purchase PatentIn Software.........................703-306-2600

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE

ERROR DETECTED   **SUGGESTED CORRECTION**   **SERIAL NUMBER:** *09/699,667*

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 _____ Wrapped Nucleics
The number/text at the end of each line "wrapped" down to the next line.
This may occur if your file was retrieved in a word processor after creating it.
Please adjust your right margin to .3, as this will prevent "wrapping".

2 _____ Wrapped Aminos
The amino acid number/text at the end of each line "wrapped " down to the next line.
This may occur if your file was retrieved in a word processor after creating it.
Please adjust your right margin to .3, as this will prevent "wrapping".

3 _____ Incorrect Line Length
The rules require that a line not exceed 72 characters in length. This includes spaces.

4 _____ Misaligned Amino Acid Numbering
The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs
between the numbering. It is recommended to delete any tabs and use spacing between the numbers.

5 _____ Non-ASCII
This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.

6 _____ Variable Length
Sequence(s) _____ contain n's or Xaa's which represented more than one residue.
As per the rules, each n or Xaa can only represent a single residue.
Please present the maximum number of each residue having variable length and
indicate in the (ix) feature section that some may be missing.

7 _____ PatentIn ver. 2.0 "bug"
A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid
sequence(s) _____. Normally, PatentIn would automatically generate this section from the
previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section
to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223>
sections for Artificial or Unknown sequences.

8 _____ Skipped Sequences (OLD RULES)
Sequence(s) _____ missing. If intentional, please use the following format for each skipped sequence.
(2) INFORMATION FOR SEQ ID NO:X:
(i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:
This sequence is intentionally skipped

Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s)

9 _____ Skipped Sequences (NEW RULES)
Sequence(s) _____ missing. If intentional, please use the following format for each skipped sequence.
<210> sequence id number
<400> sequence id number
000

10 ✓ Use of n's or Xaa's (NEW RULES)
Use of n's and/or Xaa's have been detected in the Sequence Listing.
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

11 _____ Use of <213>Organism (NEW RULES)
Sequence(s) _____ are missing this mandatory field or its response.

12 _____ Use of <220>Feature (NEW RULES)
Sequence(s) _____ are missing the <220>Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"
Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32)   (Sec. 1.823 of new Rules)

13 _____ PatentIn ver. 2.0 "bug"
Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted
file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing).
Instead, please use "File Manager" or any other means to copy file to floppy disk.

AKS-Biotechnology Systems Branch- 5/15/99

RAW SEQUENCE LISTING   DATE: 11/28/2000
PATENT APPLICATION. US/09/699,667   TIME: 04:36:25

Input Set : N:\COPIES\EBONY\09699667.txt
Output Set: N:\CRF3\11282000\I699667.raw

```
  5  <110> APPLICANT: Perreault, Jean-Pierre
  7         Ananvoranich  Sirinart
  9         Lafontaine, Daniel
 11         University de Sherbrooke
 15  <120> TITLE OF INVENTION: Nucleic Acid Enzyme for RNA Cleavage
 19  <130> FILE REFERENCE: 77475-12
 23  <140> CURRENT APPLICATION NUMBER: US/09/699,667          C-->
 27  <141> CURRENT FILING DATE: 2000-11-30
 29  <150> PRIOR APPLICATION NUMBER: PCT/CA99/00391
 31  <151> PRIOR FILING DATE: 1999-04-29
 35  <150> PRIOR APPLICATION NUMBER: CA 2,230,203
 37  <151> PRIOR FILING DATE: 1998-04-29
 41  <160> NUMBER OF SEQ ID NOS: 54
 45  <170> SOFTWARE: Patentin Ver. 2.0
 49  <210> SEQ ID NO: 1
 51  <211> LENGTH: 11
 53  <212> TYPE: RNA
 55  <213> ORGANISM: Artificial Sequence
 59  <220> FEATURE:
 61  <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide
 63         sequence comprised of ribonucleotides or a
 65         combination of ribonucleotides and
 67         deoxyribonucleotides
 71  <400> SEQUENCE: 1
```

W-->   73   (nnrhgnnhnn n)   11

```
 77  <210> SEQ ID NO: 2
 79  <211> LENGTH: 11
 81  <212> TYPE: RNA
 83  <213> ORGANISM: Artificial Sequence
 85  <220> FEATURE:
 89  <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide
 91         sequence comprised of ribonucleotides or a
 93         combination of ribonucleotides and
 95         deoxyribonucleotides
 99  <400> SEQUENCE: 2
```

W--> 101 (rrrhgnnhnn n)   11

```
105  <210> SEQ ID NO: 3
107  <211> LENGTH: 11
109  <212> TYPE: RNA
111  <213> ORGANISM: Artificial Sequence
115  <220> FEATURE:
117  <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide
119         sequence comprised of ribonucleotides or a
121         combination of ribonucleotides and
123         deoxyribonucleotides
127  <400> SEQUENCE: 3
```

W--> 129 (gggcgnnunn n)   11

Missing Mandatory features <220> to <223> to explain the "n's" in the sequence>. See #10 on the Error Summary Sheet.

RAW SEQUENCE LISTING   DATE: 11/28/2000
PATENT APPLICATION   US/09/699,667   TIME: 09:36:27

Input Set : N:\COPIES\EBONY\09699667.txt
Output Set: N:\CRF3\11282000\I699667.raw

```
153 <210> SEQ ID : 4
145 <211> LENGTH: 11
167 <212> TYPE: RNA
139 <213> ORGANISM: Artificial Sequence
143 <220> FEATURE :
145 <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide
147         sequence comprised of ribonucleotides or a
149         combination of ribonucleotides and
151         deoxyribonucleotides
155 <400> SEQUENCE: 4
W--> 157 gggcgnnhnn n                                          11
161 <210> SEQ ID N : 5
163 <211> LENGTH: 11
165 <212> TYPE: RNA
167 <213> ORGANISM: Artificial Sequence
171 <220> FEATURE :
173 <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide
175         sequence comprised of ribonucleotides or a
177         combination of ribonucleotides and
179         deoxyribonucleotides
183 <400> SEQUENCE: 5
W--> 185 gggugnnunn n                                          11
189 <210> SEQ ID No :
191 <211> LENGTH: 11
193 <212> TYPE: RNA
195 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE :
201 <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide
203         sequence comprised of ribonucleotides or a
205         combination of ribonucleotides and
207         deoxyribonucleotides
211 <400> SEQUENCE: 6
W--> 213 gggugnncnn nn                                         12
217 <210> SEQ ID N :
219 <211> LENGTH: 11
221 <212> TYPE: RNA
223 <213> ORGANISM: Artificial Sequence
227 <220> FEATURE :
229 <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide
231         sequence comprised of ribonucleotides or a
233         combination of ribonucleotides and
235         deoxyribonucleotides
239 <400> SEQUENCE:
W--> 241 aaacgnnunn n                                          11
245 <210> SEQ ID N:
247 <211> LENGTH:
249 <212> TYPE: RNA
251 <213> ORGANISM: Artificial Sequence
255 <220> FEATURE :
```

missing mandatory <220> to <223> feature to explain "n's" in the sequences

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/699,667   DATE: 11/28/200_
                                         TIME: 09:___

Input Set : N:\COPIES\EBONY\09699667.txt
Output Set: N:\CRF3\11282000\1699667.raw

```
257  <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide
259        sequence comprised of ribonucleotides or a
261        combination of ribonucleotides and
263        deoxyribonucleotides
267  <400> SEQUENCE  8
W--> 269  yhrhgnnhnn n                                        11
273  <211> SEQ ID No 9
275  <211> LENGTH: 11
277  <212> TYPE: RNA
279  <213> ORGANISM: Artificial Sequence
283  <220> FEATURE:
285  <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
287        sequence
291  <400> SEQUENCE  9
293  qqgcqgqucq u                                            11
297  <210> SEQ ID No  10
299  <211> LENGTH  10
301  <212> TYPE: RNA
303  <213> ORGANISM  Artificial Sequence
307  <220> FEATURE:
309  <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
311        sequence
315  <400> SEQUENCE  10
317  qqgcqgquecq                                             10
321  <210> SEQ ID No  11
323  <211> LENGTH  11
325  <212> TYPE: RNA
327  <213> ORGANISM  Artificial Sequence
331  <220> FEATURE:
333  <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
335        sequence
339  <400> SEQUENCE  11
341  qqgcqgqucq u                                            11
345  <210> SEQ ID No  12
347  <211> LENGTH
349  <212> TYPE: RNA
351  <213> ORGANISM: Artificial Sequence
355  <220> FEATURE:
357  <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
359        sequence
364  <400> SEQUENCE  12
365  qqgcqgqucq u                                            11
369  <210> SEQ ID No  13
371  <211> LENGTH
373  <212> TYPE: RNA
375  <213> ORGANISM: Artificial Sequence
379  <220> FEATURE:
381  <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
383        sequence
```

(handwritten annotation: "Same, refer to p. 2")

RAW SEQUENCE LISTING
PATENT APPLICATION N. US/09/699,667

Input Set : N:\COPIES\EBONY\09699667.txt
Output Set: N:\CRF3\11282000\I699667.raw

```
387 <400> SEQUENCE   :?
389 gggcaagucg g                                    11
393 <210> SEQ ID N.: 11
397 <211> LENGTH   11
397 <212> TYPE: RNA
399 <213> ORGANISM: Artificial Sequence
493 <220> FEATURE:
495 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
407      Sequence
411 <400> SEQUENCE  :?
413 gggcaagucg g                                    11
417 <210> SEQ ID N.: 15
419 <211> LENGTH  11
421 <212> TYPE: RNA
423 <213> ORGANISM: Artificial Sequence
427 <220> FEATURE:
429 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
431      Sequence
435 <400> SEQUENCE  :?
437 gggcggaucg g                                    11
441 <210> SEQ ID N   15
443 <211> LENGTH  11
445 <212> TYPE: RNA
447 <213> ORGANISM: Artificial Sequence
451 <220> FEATURE:
453 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
455      Sequence
459 <400> SEQUENCE  :?
461 gggcggaucg g                                    11
465 <210> SEQ ID N   1?
467 <211> LENGTH  11
469 <212> TYPE: RNA
471 <213> ORGANISM: Artificial Sequence
475 <220> FEATURE:
477 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
479      Sequence
483 <400> SEQUENCE  :?
485 gggcaagucg g                                    11
489 <210> SEQ ID N:
491 <211> LENGTH  ?.
493 <212> TYPE: RNA
495 <213> ORGANISM: Artificial Sequence
499 <220> FEATURE:
501 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
503      Sequence
507 <400> SEQUENCE  :?
509 gggcggggcg g                                    11
513 <210> SEQ ID N   1?
515 <211> LENGTH  ?.
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/699,667
DATE: 11/28/2000
TIME: 09:28:27

Input Set : N:\COPIES\EBONY\09699667.txt
Output Set: N:\CRF3\11282000\I699667.raw

```
517 <212> TYPE: RNA
519 <213> ORGANISM: Artificial Sequence
523 <220> FEATURE:
525 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic DNA
527         sequence
531 <400> SEQUENCE: 19
533 gqgcggguag u                                              11
537 <210> SEQ ID NO: 20
539 <211> LENGTH: 11
541 <212> TYPE: RNA
543 <213> ORGANISM: Artificial Sequence
547 <220> FEATURE:
549 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
551         sequence
555 <400> SEQUENCE: 2
557 gggcggguag u                                              11
561 <210> SEQ ID NO: 21
563 <211> LENGTH: 11
565 <212> TYPE: RNA
567 <213> ORGANISM: Artificial Sequence
571 <220> FEATURE:
575 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
576         sequence
579 <400> SEQUENCE: 21
581 gggcggguce u                                              11
585 <210> SEQ ID NO: 22
587 <211> LENGTH: 11
589 <212> TYPE: RNA
591 <213> ORGANISM: Artificial Sequence
595 <220> FEATURE:
597 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
599         sequence
601 <400> SEQUENCE: 22
605 gggcgggucg u                                              11
609 <210> SEQ ID NO: 23
611 <211> LENGTH: 11
613 <212> TYPE: RN
615 <213> ORGANISM: Artificial Sequence
619 <220> FEATURE:
621 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
623         sequence
627 <400> SEQUENCE: 23
629 gggcgggucg u                                              11
633 <210> SEQ ID NO: 24
635 <211> LENGTH: 11
637 <212> TYPE: RNA
639 <213> ORGANISM: Artificial Sequence
643 <220> FEATURE:
645 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic RNA
```

VERIFICATION SUMMARY

DATE: 11/28/2000

PATENT APPLICATION: US/09/699,667

TIME:

Input File: N:\COPIES\EBONY\09699667.txt
Output File: N:\CRF3\11282000\I699667.raw

L:24 M:270 C: Current Application Number Differs - Replaced Current Application Number
L:18 M:258 W: Mandatory feature missing. <221> not found for SEQ ID#:1
L:73 M:258 W: Mandatory feature missing. <222> not found for SEQ ID#:1
L:73 M:340 W: (46) "n" or "Xaa" used; feature required for SEQ ID#:1
L:101 M:258 W: Mandatory feature missing. <221> not found for SEQ ID#:2
L:101 M:258 W: Mandatory feature missing. <222> not found for SEQ ID#:2
L:101 M:340 W: (46) "n" or "Xaa" used; feature required for SEQ ID#:2
L:129 M:258 W: Mandatory feature missing. <221> not found for SEQ ID#:3
L:129 M:258 W: Mandatory feature missing. <222> not found for SEQ ID#:3
L:129 M:340 W: (46) "n" or "Xaa" used; feature required for SEQ ID#:3
L:157 M:258 W: Mandatory feature missing. <221> not found for SEQ ID#:4
L:157 M:258 W: Mandatory feature missing. <222> not found for SEQ ID#:4
L:157 M:340 W: (46) "n" or "Xaa" used; feature required for SEQ ID#:4
L:185 M:258 W: Mandatory feature missing. <221> not found for SEQ ID#:5
L:185 M:258 W: Mandatory feature missing. <222> not found for SEQ ID#:5
L:185 M:340 W: (46) "n" or "Xaa" used; feature required for SEQ ID#:5
L:213 M:258 W: Mandatory feature missing. <221> not found for SEQ ID#:6
L:213 M:258 W: Mandatory feature missing. <222> not found for SEQ ID#:6
L:213 M:340 W: (46) "n" or "Xaa" used; feature required for SEQ ID#:6
L:241 M:258 W: Mandatory feature missing. <221> not found for SEQ ID#:7
L:241 M:258 W: Mandatory feature missing. <222> not found for SEQ ID#:7
L:241 M:340 W: (46) "n" or "Xaa" used; feature required for SEQ ID#:7
L:269 M:258 W: Mandatory feature missing. <221> not found for SEQ ID#:8
L:269 M:258 W: Mandatory feature missing. <222> not found for SEQ ID#:8
L:269 M:340 W: (46) "n" or "Xaa" used; feature required for SEQ ID#:8